

CLAIMS

1. An antireflection film comprising at least a substrate film and an antireflection multilayer stack provided on the substrate film, wherein

the antireflection multilayer stack contains any of:

(A) a silica layer composed of an organic silicon compound, which has a refractive index ranging from 1.40 or more to 1.46 or less ($\lambda = 550$ nm), and whose composition is expressed as $\text{SiO}_x\text{C}_y : \text{H}$ ($x = 1.6$ to 1.9 , $y = 0.2$ to 1.0);

(B) a silica layer containing carbon, which has a refractive index ranging from 1.55 or more to less than 1.80 ($\lambda = 550$ nm), and whose composition is expressed as SiO_aC_b ($a = 0.7$ to 1.7 , $b = 0.2$ to 1.4); and

(C) a silica layer containing carbon, which has a refractive index ranging from 1.80 or more to 2.50 or less ($\lambda = 550$ nm), and whose composition is expressed as SiO_dC_e ($d = 0.5$ to 0.9 , $e = 1.0$ to 2.0).

2. An antireflection film according to claim 1, wherein an outermost layer of the antireflection multilayer stack is the silica layer (A), and wherein at least one of the silica layer (B) and the silica layer (C) is formed inward of the outermost layer.

3. An antireflection film according to claim 1, wherein the antireflection multilayer stack comprises the silica layer (B), the silica layer (C), and the silica layer (A), in order from a side of the substrate film.

4. An antireflection film according to claim 1, wherein the antireflection multilayer stack comprises the silica layer (C), the silica layer (A), the silica layer (C), and the silica layer (A), in order from a side of the substrate film.